Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

Description Information:

Project Name and Acronym: Naval Tactical Command Support System (NTCSS-C30)
Initiative Number: 1372   IT Registration System Number: 18626

Executive Agent for this Initiative: Department of the Navy
Program Activity/Mission Area: Logistics
Project Initiation Date: April 1995
Date of Last Acquisition Decision Memorandum (ADM): March 2000
Project is in: Phase III / NTCSS is currently in the Production/Fielding/Deployment and Operational Support phases.
Project Status: New   ☐   Ongoing   ☒

IT Project or National Security System (NSS): IT

Is this project a financial management system? No

Percentage of initiative supporting Information Assurance Activities: 1%

Project Completion Date: FY 2008
Mission Critical Status: Yes

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

Part I. Summary of Spending For Project Stages:

Project Name and Acronym: Naval Tactical Command Support System (NTCSS)
Program Activity/Mission Area: Logistics

	Cumulative Total FY99 and prior	FY 2000	FY 2001	FY 2002			
Planning*							
OP,N	2	1	1	1			
Total Dev Mod	2	1	1	1			
Full Acquisition**							
OP,N	301	56	53	42			
RDT&E	1	0	0	9			
Total Dev Mod	302	56	53	51			
Current Services/Maintenance							
O&M,N	169	41	46	46			
O&M, NR	4	1	1	1			
MP,N	0	18	19	20			
Total Current Services	173	60	66	67			
Totals Resources By FY	**477**	**117**	**120**	**119**			

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

Part II: Justification

A. Description/Performance Characteristics:

1. **Program/Investment Description.** The Naval Tactical Command Support System (NTCSS) is a tactical command support information system for management of ships, submarines, aviation squadrons, and intermediate maintenance activities (afloat and ashore). NTCSS provides the unit commanding officer and crew with the ability to manage maintenance of the ship/aircraft, parts inventory, finances, automated technical manuals and drawings, personnel information, medical, crews mess, ships store, and unit administrative information. NTCSS also provides the intermediate-level maintenance activities with the ability to manage workload and resources involved in repair actions for aviation repairables and ship's repair work packages. NTCSS is an operational system required during peace, crisis, and wartime.   NTCSS is a multi-application program that provides standard information resource management to various afloat and associated shore-based Fleet activities. It incorporates the functionality of the Shipboard Non-Tactical ADP (SNAP) systems, the Naval Aviation Logistics Command Management Information System (NALCOMIS), Maintenance Resource Management System (MRMS), and several small stand-alone information systems. NTCSS is an Evolutionary Acquisition program, typically having some applications in the Development phase and others in the Production/Deployment simultaneously. NTCSS is built on the open system, Global Combat Support System (GCSS) foundation architecture. It incorporates the common operating environment as developed under the Global Command and Control System (GCCS), utilizes the "common engine" (common hardware with the tactical shipboard systems), incorporates Paperless Ship concepts, Computer-Aided Acquisition and Logistics Support (CALS) initiatives, and thus provides a common system environment.

2. **Support to Mission/Goals.** NTCSS provides full range, responsive mission support ADP hardware and software to support management of information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft. NTCSS allows efficient management of information resources through use of standardized hardware and software to meet the mission support information management requirements for force sustainment in support of the new direction of the Navy and Marine Corps. Mission needs are: (1) ability to effectively support the management of the full range of onboard and battle group maintenance activities; (2) ability to exchange data

with own ship's tactical systems and the shore mission support infrastructure in a timely, accurate and complete manner; (3) flexible systems with sufficient accessibility, capacity and speed to effectively support local decision analysis; (4) improved automation capabilities of deployable units and associated shore sites commensurate with improvements of the shore support activities; and (5) sufficient capacity to accommodate improvements in mission support Information Resource Management (IRM). Completion of the NTCSS mission will provide the tactical commander the required combat support information for tactical decisions, improve equipment supportability and maintainability and result in a commensurate enhancement in the material condition and combat readiness of the surface, subsurface and aviation units.

3. **Pre-milestone 0/Planning Activities.** OPNAVINST 5230.16 established a management structure to provide improved, automated tactical support for the Navy, and provided a long-term commitment to sustaining the programs with technological refreshment and enhancements. In accordance with current instructions, the NTCSS Strategic Plan and MNS were developed prior to Milestone 0 and provide the new structure for the future tactical support systems afloat. NTCSS encompasses the technological refreshment of the core programs begun with SNAP III, incorporates the functionality of NALCOMIS and MRMS, includes the optimization and modernization of existing information subsystems, provides the means for the migration of Naval tactical command support subsystems to the Global Combat Support System (GCSS), improves lateral information support to other subsystems, and incorporates advances in DoD technical information and information resource management. Pre-Milestone 0 planning developed a phased approach, which ends with Business Process Reengineering and is discussed in more detail later in this form.

4. **Basis for Selection.**   Detailed Economic Analyses of the Optimized NTCSS Program clearly establish the requirement for investment to support the NTCSS mission. In short, the NTCSS mission is to provide a full range, responsive mission support ADP hardware and software to support management of information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft. These ships, submarines and aircraft are manned by military personnel performing what is clearly an inherently government function.

The NTCSS Program office is compiling a BPI Master Plan that provides a foundation for future Business Process Reengineering. Several BPR efforts have already begun. The following paragraphs were extracted from the NTCSS MNS.

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

The current core tactical support systems hardware architecture is antiquated, unreliable, proprietary, capacity-bound, environmentally obtrusive, and an unacceptably expensive and cumbersome logistics burden to the ship. In addition, the core systems software architecture is frequently in an obsolete software environment that precludes functional process improvement to meet Fleet requirements. An initial step in addressing some of these deficiencies was the SNAP III program which began the technology enhancement of the existing core SNAP systems.

There are three key mission deficiencies that will be addressed by NTCSS:

- **An ineffective and inefficient software architecture that make change processes lengthy and difficult.** Many existing tactical support applications are in a software environment that limits exchange of data between applications due to the nature of the original programming language and file structure. As Fleet requirements for data exchange and process improvement have increased, it becomes increasingly difficult to support these requirements in the existing software architecture.

  This deficiency is being addressed through the optimization of the existing NTCSS system applications into a modern software architecture. This effort includes transitioning the existing software code into the Joint Maritime Command Information System (JMCIS) Common Operating Environment (COE), using Graphical User Interfaces (GUls) and moving existing database files into a Relational Data Base Management System (RDBMS). The benefits accrued from these changes include a more effective and efficient software operating environment and file structure, improved data access among system applications, improved man-machine interface, and support of future modernized system applications. These improvements will be fielded incrementally to reduce the time and cost of training Fleet personnel.

- **An obsolete Fleet tactical support technical architecture.** Existing Fleet hardware is technologically outdated, slow, expensive to maintain, and not common to the tactical shipboard computing infrastructure. This deficiency results in expenditure of scarce Fleet

operating funds along with unique and expensive training and support infrastructures for Fleet equipment and personnel. It also prevents technical and functional enhancements of Fleet tactical support systems.

This deficiency is being addressed through technology enhancements of existing core tactical support hardware begun with SNAP III. The benefits accrued from these improvements are documented in the SNAP III Economic Analysis and Operational Evaluation report.

- **An inability to develop modernized system applications to support the functional process improvement of Fleet tactical support processes.** The existing tactical systems support the core Fleet processing requirements. Changes beyond these core requirements, however, have been increasingly difficult to develop and implement. Examples of some of the tactical support process improvements required by the Fleet include providing key tactical support data to the Command and Control (C2) systems, improved management of aviation repairables, support of the Battle Group Intermediate Maintenance Activity (BGIMA) and Navy Regional Maintenance requirements to exchange maintenance actions between different maintenance activities, interface with Continuous Acquisition and Life-Cycle Support (CALS) data, streamlining afloat supply and financial processes among different types of platforms, and enhancing the automated link between aviation organizational and intermediate maintenance.

This deficiency is being addressed through incremental process improvements recommended by the Fleet. By re-engineering the system through the Optimized initiative, modernized tactical support applications will be fielded that allow for Fleet process changes. The benefit that accrues from the correction of this deficiency will be improved Fleet tactical support process implementation. These improved processes will allow Fleet units to support out-year tactical support operational requirements within the future USN and USMC force structure.

B. Program Management/Management Oversight:

1. **Process Owner.** Program Manager is CAPT Speer Ezzard, Space and Naval Warfare Systems Command, 4301 Pacific Highway, San Diego, CA 92110-3127, (619) 524-7553, (619) 524-7384 (FAX).

2. **Approach.** NTCSS uses the Integrated Project Team concept. The program is managed within the Space and Naval Warfare Systems Command (SPAWAR), Information Support Systems Directorate (PD15) by the NTCSS Program Manager (PMW151). The Program Manager coordinates technical requirements within the SPAWAR community to ensure architectural compatibility. He is also responsible for coordinating functional requirements with designated functional managers in Naval Air Systems Command (NAVAIRSYSCOM), Naval Sea Systems Command (NAVSEASYSCOM), Naval Supply Systems Command (NAVSUPSYSCOM), Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT), and the Marine Corps System Command (MARCORSYSCOM). The Central Design Agent for NTCSS is SPAWAR Systems Center, Chesapeake, and the In-Service Engineering Agent is SPAWAR Systems Center, Charleston, Det St Julien's Creek.

C. Contract Information:

1. **Major Contracts:** NTCSS Program uses a government activity to integrate COTS hardware and software.

2. **Contract Type.** NTCSS primarily uses BPA contracts to purchase required material. No changes to the current acquisition strategy are foreseen. The current contracts and acquisition efforts for the individual sub systems (SNAP III, NALCOMIS) will continue. Following is a list of major contracts used by NTCSS:
   (1)   NT Servers
           Contract # N68939-96-A-0005   Contractor: Compaq

Provides for the procurement of NT Servers for Navy and Marine Aircraft Squadron installations.

(2) Scientific & Engineering Workstation Procurement (SEWP II)
Contract # NAS5-96009-DP Contractor: Hewlett Packard Co.
Provides for the procurement of TAC 4 equipment for afloat and ashore.

(3) Workstations, Printers and Laptops
Contract # N68939-96-A-0006 Contractor: GTSI
Provides for the procurement of PC's, Printers, Monitors and Laptops for afloat and ashore.

3. **Performance.** N/A.

D. Architecture and Infrastructure Standards

1. **Compliance.** NTCSS is currently seeking DII COE compliance in synch with SPAWAR's Horizontal Integration initiative. The ultimate goal is to reach the required Level-7 compliance to be an integral component of the Global Combat Support System-Maritime (GCSS-M) concept.

2. **Infrastructure Strategy.** NTCSS is supporting IT 21 strategies. IT21 is a Navy joint CINCPACFLT/CINCLANTFLT initiative to accelerate C4I program of record to create a global network centric infrastructure both afloat and ashore that will accommodate Information Superiority in the 21st century. Further, NTCSS will utilize the Navy/Marine Corps Intranet (N/MCI) at shore installations.

3. **Hardware.** Yes.

4. **Transport.** DII COE transport layers are used and provide maximum interoperability.

5. **Interdependencies.**   This program is dependant on the N/MCI, Base Level Information Infrastructure (BLII) and Ship Communications Automation. This program is also dependent on SPAWAR PMW 158 for installation of shipboard LANs. Future development will be dependent upon the DII COE.

6. **Software Type.**   Tailored GOTS and COTS application suite. COTS software development tools are used to develop custom applications to support NAVAIR/NAVSEA/NAVSUP functional requirements.

E. **Program Highlights**

1. FY 2001 ACCOMPLISHMENTS:

   - Fielding to 36 Afloat and 103 Ashore NTCSS sites.

   - The NTCSS Program Manager briefed the Department of Navy Chief Information Officer (DON CIO) and the Deputy Assistant Secretary of the Navy for Command Control Communications and Intelligence (DASN C4I) on 27 March 2001.

   - The NTCSS Resource Sponsor (OPNAV N6) held the third Flag Level Executive Steering Committee (ESC) on 19 March 2001.

   - The MDA, DASN (C4I), was briefed on 8 February 2001 and the next review is scheduled for July 2001. The 8 Feb review covered the Web Enabling initiative, the Status of the OOMA test and evaluation toward MS III D, and the NAVY ERP efforts of NAVSEA, NAVAIR, and NAVSUP with the potential transition of NTCSS applications to ERP applications. A letter has been forwarded to the MDA requesting approval to prototype additional OOMA sites, pending MS III D certification.

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

- The program office is currently working on various issues with NMCI including resolution of the embarkable commands, shore installs, training sites, DII COE implementation and Windows 2000 requirements of the client. These issues are currently being worked amongst PMW 151, CNET, CMC, AIRPAC and AIRLANT and PMW 165, the NMCI program Office.

- The NTCSS Program Office continued extensive Enterprise Resource Planning (ERP) coordination with NAVAIR, NAVSUP and NAVSEA utilizing SSC-Chesapeake as the potential future overall integrator.

- The NTCSS Program Office has started a planning effort to "Web Enable" the NTCSS applications. The NTCSS program Office and SSC Chesapeake (NTCSS CDA) have researched and constructed an acquisition strategy to "Web Enable" the NTCSS applications. The plan as briefed to the Flag review on 19 March 2001 involves start of development on 1 May 2001 with incremental fielding as applications become available. The start for this effort is subject to approval of this effort as a 'New Start' and associated funding being added up in the NTCSS line.

- NTCSS commenced FOT&E with COMOPTEVFOR on 28 February 2000 and completed 7 April 2000. Final COTF report was received 25 July 2000. A Verification of Correction of Deficiencies (VCD) for suitability commenced 27 Oct 00. Completion of VCD is commensurate with COTF visit to Force Level ship that has incorporated the corrections required. It is anticipated that VCD will complete during 3rd quarter FY01. This test concludes all necessary suitability testing for four Optimized NTCSS applications in the most intense afloat computing environment.

- During this quarter the Optimized Organizational Maintenance Activity (OOMA) application started FOT&E and this application will go through the same accreditation as the other Optimized applications. Interim Authority to Operate (IATO) was granted in July 2000 and CT&E testing has been completed. CNO message 152047Z DEC 00 formally granted approval for the OOMA Virtual Private Network (VPN) solution for Firewall compliance and extended the Interim Authority to Operate until 01 June 2001. The Program office expects Formal Authority to Operate by June 2001.

- The NTCSS Program Office completed Job Task Analyses (JTA) on all NTCSS application segments. The final Job Task Analyses on OMMS-NG and R-ADMIN were completed on 16 March 2001. The NTCSS Capstone NTSP has completed review and is awaiting final approval by OPNAV. The Optimized IMA and OMA NTSP appendices have been delivered to the Program Office for review and submission to SPAWAR and OPNAV. The R-Supply appendix is due to the Program Office on 30 April. The first "C" school class for Optimized OMA is scheduled for test teach on 11 June.

- NTCSS Optimized NALCOMIS OMA (OOMA) is a major Business Process Improvement (BPI) segment supporting the Naval and Marine Corps aviation communities. This initiative is being coordinated by SPAWAR and SPAWAR Systems Center (SSC) Chesapeake, and several major commercial contractors including B. F. Goodrich, Raytheon, and Boeing. Optimization of OMA is the central part of the NTCSS program's support for the Naval Aviation Automated Maintenance Environment (AME) initiative being sponsored by the Naval Air Systems Command (NAVAIR). The implementation of OOMA is a vital part of the Navy's plan for reaching the Aviation Maintenance Supply Readiness (AMSR) goals.

- OPNAV NOTICE 5450 OF 20 Nov 00 promulgated a change in activity title and delegation of authority for Naval Reserve Information Systems Office (NRISO), changing the activity from the Naval Reserve Information Systems Office, New Orleans, to the Space and Naval Warfare Information Technology Center, New Orleans, (SPAWAR (ITC)) or (SITC) under the Commander, Space and Naval Warfare Systems Command (SPAWAR). Program management for the Human Resources (HR) Automated Information Systems (AIS) formerly assigned to Systems Executive Office for Manpower and Personnel (SEO(MP)) and NRISO will be distributed between the PEO(IT) and SPAWAR. Commander, SPAWAR has assigned the NTCSS Program Manager with the acquisition oversight and financial responsibility for the SPAWAR acquired programs.

2. FY 2002 PLAN:

- Field to 20 Afloat and 97 Ashore NTCSS sites.

1372/ NAVY TACTICAL COMMAND SUPPORT SYSTEM – IT Major Program

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

- Development of Web Enabled NTCSS pending Congressional Approval and funding commitment by CNO N6.

- Anticipate 3 software maintenance releases in support of SPAWAR's IT-21 Block 1 Upgrade.

- Complete security certification documentation (DITSCAP) for Optimized Organizational Maintenance Activity (OOMA) in order to meet Milestone III D.

3. FY 2003 PLAN:

- Field to 21 Afloat and 97 Ashore NTCSS sites

F. Financial Basis for Selecting the Project:

Analysis of Full Life-Cycle Costs Life cycle cost estimate for NTCSS was completed for the NTCSS Optimized Economic Analysis (EA) on 13 August 1999. The NTCSS Optimized EA has been independently reviewed and validated by OSD (PA&E) and NCCA. An extract of EA Format CB is shown below:

($M)	Prior	FY99	FY00	FY01	FY02					
Investment										
Program Mgmt	0.0	3.4	6.8	6.8	6.8					
Concept Explor	0.0	0.0	0.0	0.0	0.0					
System Dev	16.8	6.1	0.0	0.0	0.0					
System Proc.	121.1	7.9	12.5	14.4	15.6					
Implem & Field	12.7	13.2	33.4	41.5	55.1					
Upgrade/P3I	0.0	0.0	0.0	0.0	0.0					
Operations and Support										
Sys Mgmt	0.0	0.0	0.0	0.0	0.0					
Ann Ops Invst	0.0	0.0	0.0	0.0	0.0					
H/W Maint	0.0	0.0	0.0	0.0	0.0					
S/W Maint	0.0	0.0	0.0	0.0	0.0					
Site Ops	0.0	0.0	0.0	0.0	0.0					
Alt Phase Out										
Syst Mgmt	0.0	0.4	0.0	0.0	0.0					
SQ Ops & Support	0.0	93.4	86.6	68.6	46.1					

1372/ NAVY TACTICAL COMMAND SUPPORT SYSTEM – IT Major Program

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

LIFE CYCLE COSTS	150.6	124.4	139.3	131.3	123.6				

All figures above in constant FY97 $M.

1. **Cost/Benefit Analysis.**

BENEFITS	$FY97,M
Internal AIS Costs (Positive Results = Savings)	1506.6
Reduced Hardware Maintenance	121.1
Reduced Repair Part Usage	560.9
Reduced Software Maintenance	113.3
Reduced Training Costs	19.9
System Management	23.1
Investment	(126.3)
Upgrades	41.3
Productivity Improvements*	744.1
Hardware - Based	615.4
Software - Based	128.7
GRAND TOTAL	2250.7

* Not reflected as a cost savings in the Economic Analysis

Quantifiable Benefits Totals

1372/ NAVY TACTICAL COMMAND SUPPORT SYSTEM – IT Major Program

Non-Quantifiable Benefits
1. Improved decision making
2. Better management information
   - Refined input interfaces and centralized data storage
   - System will handle classified and sensitive unclassified information
   - Improved communications within commands
3. Greater flexibility
4. Improved and timelier report generation
5. Reduced footprint will allow more living and working space
6. System will provide backup and interface to shipboard tactical system
7. Reduced weight, power consumption, and heat production
8. System complies with DoD/Industry/National/International standards
9. Future Business Process Improvements will be less expensive

2. **Analysis of Alternative Options**. The alternative options that were analyzed in the Economic Analysis consisted of the Status Quo and Preferred Alternatives.

3. **Underlying Assumptions.** The scope of the NTCSS Optimization Economic Analysis (EA) addresses only those elements of the program that are being "Optimized". Thus, costs and benefits associated with NALCOMIS OMA are omitted, as are costs related to MRMS and future business process improvement projects (these are part of Modernized NTCSS). Also omitted are costs and benefits related to Naval Aviation's Automated Maintenance Environment (AME) initiative and the NTCSS program's contribution to base-level infrastructure improvements. Thus, the requirements that are addressed in the EA are a subset of NTCSS as a whole.

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

For the purposes of the Economic Analysis, the Status Quo alternative is represented by the state of the Fleet (and related shore sites) with respect to SNAP III hardware at the end of FY96. With the exception of new construction ships, the Status Quo alternative provides for no more SNAP III hardware installations after FY96, meaning the Fleet profile as of September 1996 with respect to SNAP I, II, and III is maintained in the future years (decommissioning are taken into account).
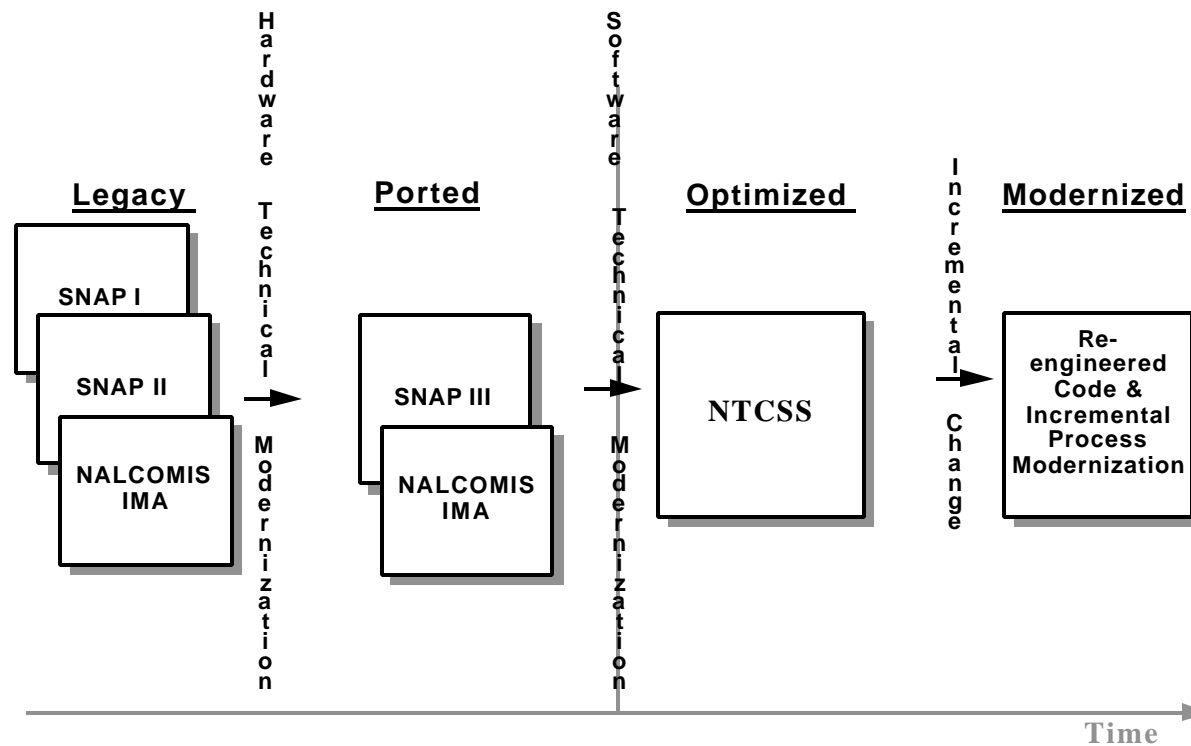Additional relevant assumptions and ground rules include the following:

- Base Year for all estimates is FY97.

- The future year exhibits cover FY97 through FY12.

- Sunk Cost covers the period through FY96. Only sunk costs that add some value to the economic analysis will be presented, (e.g., sunk costs relating to Optimized software development).

- The Status Quo includes future investment/modernization only to the extent that such investments are required to maintain existing capabilities.

- All future investment and/or modernization required to host the NTCSS Optimized applications (e.g., SNAP III hardware, software, and LANs and any upgrades *specific* to Optimization) will be included as part of the Preferred Alternative in the NTCSS Optimization Economic Analysis.

- Cost estimates developed for elements of the Status Quo alternative make use of previous work (updated as appropriate) to the greatest possible extent.

- All future costs required to fully implement NTCSS Optimization will be included in the Economic Analysis regardless of the type of funds involved and regardless of whether they are part of another, already approved program.

- Initial Operational Capability (IOC) is FY99. FOC is September FY05.

- The NTCSS Optimization EA reflects the prevailing 10 year Office of Management and Budget (OMB) discount rate as of February 1997.

- Escalation indices consistent with those published in March 1996 by the Naval Center for Cost Analysis are used in the subject EA.

4. **Estimate of Risks**. Risk mitigation in the NTCSS Program is in the form of incremental development. As can be seen in the diagram below, the legacy system was replaced with modern hardware and an open system software operating environment. The legacy software application code was "ported" to enable it to execute in the new software operating environment. The functionality as well as the look and feel of the software applications was unchanged at this point. In the next phase, the applications software was "Optimized" which consisted of rewriting the code in a 4th Generation Language (4GL) to replace legacy COBOL code, providing a Graphic User Interface (GUI) to replace the command based interface, and introducing a Relational Data Base Management System (RDBMS) to replace the flat file data base system in the legacy system. Once the NTCSS System is Optimized, the foundation exists for rapid and economical Business Process Reengineering. By dividing the development into these phases, with testing and oversight associated with each of them, the NTCSS program has reduced its risk to a minimal level.

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

Hardware Technical Modernization

Software Technical Modernization

Incremental Change

Legacy

SNAP I

SNAP II

NALCOMIS IMA

Ported

SNAP III

NALCOMIS IMA

Optimized

NTCSS

Modernized

Re-engineered Code & Incremental Process Modernization

Time

NTCSS Optimization Software Application Progression

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

Part III. Assessment

A. Performance Based System.

1. **Baseline Information.** FY 95

Constant FY95 $'s		FY 1999	FY 2000	FY 2001	FY 2002			
B. Previous Baseline								
Cost Goals ($M)	OMN	32.6	29.8	32.6	34.3			
	OPN	78.1	54.7	50.8	39.3			
Schedule Goals	Installs	122	133	139	117			
C. Baseline								
Cost Goals ($M)	OMN	32.6	30.4	33.0	34.8			
	OPN	78.6	54.6	50.7	39.3			
Schedule Goals	Installs	122	133	139	117			
D. Current Estimate								
Cost Goals ($M)		111.1	85.0	83.7	74.1			
Schedule Goals	Installs	122	133	139	117			
E. Variance from Baseline Goals								
Cost Goals ($M)								
Schedule Goals	Installs							

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

2. **Management Oversight.** NTCSS Program performance is monitored by an ASN (RDA) Working Integrated Product Team (WIPT) approximately every six months. Periodically, a detailed Economic Analysis (EA) is reviewed at the WIPT along with other appropriate documentation for oversight.   Each time an EA is reviewed, it is compared with previous analyses to track cost and schedule progress of the program. In addition, benefits are reviewed and validated to provide a basis to track and analyze the performance of the fielded systems. At each review, EAs receive an Independent Cost Estimate (ICE) prepared by the Naval Center for Cost Analysis (NCCA) and benefits are validated by OSD (PA&E). Cost, Schedule and Performance are reviewed at some level at each WIPT meeting.

3. **Re-baselined.** The NTCSS Program was rebaselined via submission of NTCSS APB Revision 3 in January 2001. The rebaselining was due to the following changes to the NTCSS budget:

   - Ρrogram Review (PR) - 01 accelerated the NTCSS Other Procurement, Navy (OP,N) budget from the FY04 -FY05 timeframe forward to the FY01 - FY03 timeframe in order to complete the Optimized OMA software in FY03.

   - A net redistribution of $23.2M in OP,N funds from the FY02-FY03 timeframe to the FY04 - FY07 timeframe due to Program Operating Memorandum (POM) – 02 and additional Navy Comptroller controls.

In order to best satisfy the direction provided in Assistant Secretary of Defense (ASD) (C3I) (MAISRC/Information Technology Overarching Integrated Product Team (ITOIPT)) and Deputy Assistant Secretary of the Navy (DASN) (C4I/EW/Space) Acquisition Decision Memorandums (ADM) to date and to comply with the previously reported standards requirements of IT21 - Block 1 Upgrade, the Program Office has developed a new installation plan.

When compared to PR-01 and NTCSS APB Revision 2 of 24 December 1998, this new installation strategy results in the following deferrals:

Department of Defense
Department of the Navy
Major Investment Report
FY 2002 Amended Budget Estimates

- NTCSS Optimized software installations for 71ships from the FY02 - FY04 timeframe to the FY05 - FY08 timeframe.

- NTCSS Optimized software installations for 7 support and training sites from the FY02 - FY04 timeframe to the FY05 - FY06 timeframe.

4. **Milestone Slippages.** No.

5. **Cost Goals.** No.

6. **Impact.** Delays FOC until FY08. Increases Life Cycle Costs for NTCSS Legacy applications. Non-uniform IT-21 hardware/software configuration degrades fleet performance.

7. **Variance from Baseline Goals/Schedules.** See paragraph 6, above.

8. **Notification.** Non-compliance with NTCSS APB Revision 3 will require notification of the Milestone Decision Authority for NTCSS, DASN(C4I) via a Revision 4 to the APB.

9. **Justification of Variance.** The deferment of FY02 and FY03 installations resulted from reduced OP, N funding.

10. **Variance Attributed to Contract Changes.** No.

11. **Performance Goals.** .
     Performance goals for NTCSS applications will not be affected by the reduction in OP,N funding. They remain as follows:

System Performance. To be effective, NTCSS must meet the following key performance characteristics:

- The system must be capable of operating continuously, seven days a week, 24 hours a day for extended periods of time.

- The system average response time (data inquiry, retrieval, update, modification) must be less than 10 seconds (threshold)/10 seconds (objective) for large sites (100 workstations or more)and 8 seconds (threshold)/13 seconds (objective) for small sites (less than 100 workstations).

Overall Mission Area. The Naval Tactical Command Support System (NTCSS) is a tactical command support information system for management of ships, submarines, aviation squadrons, and intermediate maintenance activities (afloat and ashore). NTCSS provides the unit commanding officer and crew with the ability to manage maintenance of the ship/aircraft, parts inventory, finances, automated technical manuals and drawings, personnel information, medical, crews mess, ships store, and unit administrative information. NTCSS also provides the intermediate level maintenance activities with the ability to manage workload and resources involved in repair actions for aviation repairables and ships repair work packages. NTCSS is an operational system required to operate the unit during peace, crisis, and war time.

Mission Need. NTCSS mission is to provide tactical commanders the required tactical support information for tactical decisions, improve equipment supportability and maintainability, and result in a commensurate enhancement in the material condition and combat readiness of surface, subsurface, and aviation units. Specific operational objectives include the following:

- Improve the internal productivity of personnel and the material condition of shipboard equipment, aircraft and combat systems through use of standard automated information systems.

- Standardize hardware, operating system software, and applications software, to the degree feasible, to facilitate ease of system development, deployment, training and maintenance.

- Realize economies in procurement and installation by the use of suitable commercial off-the-shelf (COTS) hardware and software.

- Employ an open-system architecture and a modular design concept, in both hardware and software, to permit easier system growth and maintenance and to permit application of functional process improvement and business process reengineering concepts, while minimizing application interface requirements.

- Incorporate modern object-oriented, user-friendly, interactive software with a common relational database management system (RBDMS) to reduce training requirements and enhance ease of system operation by inexperienced users.

Incorporate a capability to allow qualified, experienced users to draw upon the data contained within NTCSS component systems to perform off-line functions, without impacting, compromising or corrupting data within the NTCSS.

12. Accomplishments.

- **DON CIO/DASN C4I Review of NTCSS:**
  The NTCSS Program Manager briefed the Department of Navy Chief Information Officer (DON CIO) and the Deputy Assistant Secretary of the Navy for Command Control Communications and Intelligence (DASN C4I) on 27 March 2001. The brief topics included program overview and Clinger Cohen Act Compliance with Section 8102 of the DOD FY2001 Appropriations Act and Section 8121 of the DOD FY2000 Appropriations Act.

- **Flag Level Reviews for NTCSS:**
  The NTCSS Resource Sponsor (OPNAV N6) held the third Flag Level Executive Steering Committee (ESC) on 19 March 2001. The purpose of the review was to provide OPNAV N6 commitment to Web Enable the NTCSS Products with a target start of 1 May 2001. The Flag review also focused on the incremental development of the applications for Web Enablement, data replication and enterprise database. It was agreed that the NTCSS Software FOC will be accelerated to FY04 pending an additional $42 Million from

CNO N6. The NTCSS Hardware FOC will remain at FY08 as identified by APB Revision 3. Program documentation to be updated for this "New Start" is a Business Case Analysis, an Acquisition Plan, changes to the Test and Evaluation Master Plans (TEMPs), security documentation and Logistics documentation.

- **MDA Review:**
  The MDA, DASN (C4I), was briefed on 8 February 2001 and the next review is scheduled for July 2001. The 8 Feb review covered the Web Enabling initiative, the Status of the OOMA test and evaluation toward MS III D, and the NAVY ERP efforts of NAVSEA, NAVAIR, and NAVSUP with the potential transition of NTCSS applications to ERP applications. A letter has been forwarded to the MDA requesting approval to prototype additional OOMA sites, pending MS III D certification.

- **Navy and Marine Corps Intranet (NMCI):**
  The program office is currently working on various issues with NMCI including resolution of the embarkable commands, shore installs, training sites, DII COE implementation and Windows 2000 requirements of the client. These issues are currently being worked amongst PMW 151, CNET, CMC, AIRPAC and AIRLANT and PMW 165, the NMCI program Office.

- **Enterprise Resource Planning (ERP):**
  During the reporting period, the NTCSS Program Office continued extensive Enterprise Resource Planning (ERP) coordination with NAVAIR, NAVSUP and NAVSEA utilizing SSC-Chesapeake as the potential future overall integrator. As part of its effort toward a Revolution in Business Affairs, the Navy has identified Aviation Supply Chain & Maintenance Management and Regional Maintenance Management as ERP pilot projects utilizing Commercial ERP products (SAP R3). These software applications/products may eventually run all business applications for the Navy, and potentially replace existing NTCSS applications as a result of this business process reengineering effort. These ERP pilot projects have currently chosen two NTCSS applications, RADMIN and OOMA, to be required bolt-on solutions due to their unique and advanced functionality. The managers of all four ERP Pilot projects recognize the need for Cross-Pilot interface and cooperation. Recently there have been new initiatives to enhance the efforts to find commonality between the

Pilots. Cross-Pilot teams have been set up to review such issues as software configuration management and joint NTCSS transition interfaces. Of utmost importance is the need for the Pilot managers and their working groups to share ERP information relative to their developmental experiences in order to leverage progress and successes beneficial to all Pilots, and to the ERP program in general. Recent Flag-level meetings between NAVAIR/NAVSUP/NAVSEA and SPAWAR have done much to further joint-ness in ERP development and downstream success.

- **OOMA Aircraft Weapon System Configuration Baselines and Mid-Tier Servers:**
  Fielding of NTCSS Optimized OMA (OOMA) is a multi-organizational team effort involving SPAWAR, NAVAIR, and the Aviation Type Commanders within Navy. Two items on which OOMA is dependent are electronic aircraft configuration baseline databases, which are required in order to support the configuration management functionality, and the procurement and installation of mid-tier servers to support database replication. These two items are under the purview of NAVAIR and are at some risk due to the current status of a directed plus up to the OM&N PRL/PRE accounts at NAVAIR. This plus up was an outcome of the Navy IG's report on aviation readiness issued last year. Due to the tenuous status of this plus-up NAVAIR has provided interim funding in concert with internal efforts associated with the stand-up of the Configuration Management Information System (CMIS). However, these funding issues have caused delays in aircraft configuration baseline deliveries, which have prevented the NTCSS program from progressing at the desired install rate. The fielding of mid-tiers has also been hampered due to the status of these plus-ups.

- **Web Enabling of the NTCSS applications:**
  As reported last quarter the NTCSS Program Office has started a planning effort to "Web Enable" the NTCSS applications. The NTCSS program Office and SSC Chesapeake (NTCSS CDA) have researched and constructed an acquisition strategy to "Web Enable" the NTCSS applications. The plan as briefed to the Flag review on 19 March 2001 involves start of development on 1 May 2001 with incremental fielding as applications become available. The start for this effort is subject to approval of this effort as a 'New Start' and associated funding being added up in the NTCSS line.

- **Developmental and Operational Testing of NTCSS aboard USS George Washington:**
  NTCSS commenced FOT&E with COMOPTEVFOR on 28 February 2000 and completed 7 April 2000. Final COTF report was received 25 July 2000. A Verification of Correction of Deficiencies (VCD) for suitability commenced 27 Oct 00. Completion of VCD is commensurate with COTF visit to Force Level ship that has incorporated the corrections required. It is anticipated that VCD will complete during 3rd quarter FY01. This test concludes all necessary suitability testing for four Optimized NTCSS applications in the most intense afloat computing environment.

- **Security Certification:**
  During this quarter the Optimized Organizational Maintenance Activity OOMA) application started FOT&E and this application will go through the same accreditation as the other Optimized applications. Interim Authority to Operate (IATO) was granted in July 2000 and CT&E testing has been completed. CNO message 152047Z DEC 00 formally granted approval for the OOMA Virtual Private Network (VPN) solution for Firewall compliance and extended the Interim Authority to Operate until 01 June 2001. The Program office expects Formal Authority to Operate by June 2001.

- **Training Situational Analysis:**
  During the reporting period the NTCSS Program Office completed Job Task Analyses (JTA) on all NTCSS application segments. The final Job Task Analyses on OMMS-NG and R-ADMIN were completed on 16 March 2001. The NTCSS Capstone NTSP has completed review and is awaiting final approval by OPNAV. The Optimized IMA and OMA NTSP appendices have been delivered to the Program Office for review and submission to SPAWAR and OPNAV. The R-Supply appendix is due to the Program Office on 30 April. The first "C" school class for Optimized OMA is scheduled for test teach on 11 June.

- **Aviation Organizational Maintenance Activities (OMA):**

NTCSS Optimized NALCOMIS OMA (OOMA) is a major Business Process Improvement (BPI) segment supporting the Naval and Marine Corps aviation communities. This initiative is being coordinated by SPAWAR and SPAWAR Systems Center (SSC) Chesapeake, and several major commercial contractors including B. F. Goodrich, Raytheon, and Boeing. Optimization of OMA is the central part of the NTCSS program's support for the Naval Aviation Automated Maintenance Environment (AME) initiative being sponsored by the Naval Air Systems Command (NAVAIR). The implementation of OOMA is a vital part of the Navy's plan for reaching the Aviation Maintenance Supply Readiness (AMSR) goals. Chief of Naval Operations (CNO) message date time group 042052Z Aug 99 stresses this importance "fully supports OPNAV (N88) and NAVAIR initiatives to reduce workload associated with the Naval Aviation Maintenance Program (NAMP)". During this quarter, Optimized OMA prototype implementations expanded into the E-2C Hawkeye community in Norfolk, VA and Point Mugu, CA. In February, Optimized OMA achieved a "Naval Aviation" first during a Developmental Test (DT) event with Carrier Air Wing Eleven assets aboard USS Carl Vinson by establishing bi-directional database replication via satellite using the installed IT-21/Challenge Athena system with shore backhaul to SPAWAR System Center Chesapeake. Over three thousand maintenance, flight, and configuration transactions successfully replicated from afloat to ashore with an average delivery time of less than twenty minutes. Upon resolution of items identified during final DT events, Optimized OMA was certified "ready for test" during an OTRR on 09 March 2001. FOT&E at eight sites with OPTEVFOR oversight commenced on 12 March and is scheduled to complete on June 18.

- **Expansion of NTCSS Program Manager Duties SPAWAR Information Technology Center, New Orleans:**
  OPNAV NOTICE 5450 OF 20 Nov 00 promulgated a change in activity title and delegation of authority for Naval Reserve Information Systems Office (NRISO), changing the activity from the Naval Reserve Information Systems Office, New Orleans, to the Space and Naval Warfare Information Technology Center, New Orleans, (SPAWAR (ITC)) or (SITC) under the Commander, Space and Naval Warfare Systems Command (SPAWAR). Program management for the Human Resources (HR) Automated Information Systems (AIS) formerly assigned to Systems Executive Office for Manpower and Personnel (SEO(MP)) and NRISO will be distributed between the PEO(IT) and SPAWAR. Commander, SPAWAR has assigned the NTCSS Program Manager with the

acquisition oversight and financial responsibility for the SPAWAR acquired programs. There are approximately 15 Human Resource AIS programs currently being developed or maintained at SITC New Orleans that are in the process of transitioning to the NTCSS Program Office. The NTCSS program office is currently researching the status of these programs to determine how to incorporate their financial and acquisition oversight into the NTCSS oversight approach. The MOA documenting which programs will be managed by PEO(IT) and which will be managed by SPAWAR (and therefore the NTCSS Program Office) is currently in chop between SPAWAR, and PEO(IT) in preparation for signature by ASN(RDA).

F. Corrective Actions:

1. **Ongoing/Proposed Corrective Actions.** The Program Office treats cost as an independent variable. Future funding adjustments will require changes to proposed schedule, configuration, and performance goals. The NTCSS Program Office will seek acceleration of funds from FY06 and beyond via its PR-03 and POM-04 submissions. In the interim, the NTCSS Program's deployment schedule will be modified due to the OP,N reductions of POM-02. However, no system configuration changes or modifications of performance goals will occur. In addition to these efforts, the Program Office will look to gain efficiencies in procurement installs and Life Cycle Support (LCS) in order to mitigate funding decreases.

2. **Effect of Actions.** TBD

3. **Barriers or Risks.** N/A

4. **Schedule and Milestone Goals.** N/A

5. **Estimate Change.** Estimated changes due to POM02 funding cuts were submitted via NTCSS APB Revision 3.

6. **Variance From Schedule.** N/A.

7. **Corrective Actions.** N/A

8. Performance Goals. N/A

a. Accomplishments. N/A.

b. Variance From Performance Goals. Performance goals are unaffected.

c. Corrective Actions Taken on Performance Goals. N/A